

**ABSTRACT**

A MOS power component in which the active regions extend perpendicularly to the surface of a semiconductor chip substantially across the entire thickness thereof. A

5 MOS power transistor according to the present invention alternately includes a source region of a first conductivity type, an intermediary region, and a drain region of the first conductivity type, each of these regions extending across the entire thickness of the substrate, the source and drain regions being contacted by conductive fingers or plates substantially crossing the substrate, insulated and spaced apart conductive fingers

10 crossing from top to bottom the intermediary region, the horizontal distance between the insulated fingers being such that the intermediary region can be inverted when an appropriate voltage is applied to these insulated fingers.